

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



June 17, 2002

TO: RAILROAD CORPORATIONS AND OTHER INTERESTED PARTIES

SUBJECT: DRAFT RESOLUTION AUTHORIZING DEVIATION FROM GENERAL ORDER NO. 75-C, SECTION 7.8, ALLOWING THE UNION PACIFIC RAILROAD COMPANY TO RETAIN, UNDER CERTAIN CONDITIONS, THE USE OF 20-INCH BACKGROUNDS INSTALLED ON ITS RAILROAD CROSSING WARNING DEVICES CURRENTLY IN OPERATION

This is a *draft* resolution (SX-49) of the Consumer Protection and Safety Division. It will be on the July 17, 2002, Commission meeting agenda. The Commission may vote on this resolution, or it may postpone a vote until later.

When the Commission votes on the resolution, it may adopt all or part of it as written, amend or modify it, or set it aside and prepare a different resolution. Only when the Commission acts does the resolution become binding.

Interested parties *may* submit comments on the draft resolution. An original and two copies of the comments, with certificate of service, should be submitted to:

Haji Jameel
Consumer Protection and Safety
Rail Crossing Engineering Section
505 Van Ness Avenue, 2nd Floor
San Francisco, CA 94102

Comments must be *received* by the Consumer Protection and Safety Division by July 8, 2002. Parties must serve a copy of their comments on all persons on the Service List attached to the draft resolution on the same date that the comments are submitted to the Division. Comments shall be limited to 5 pages in length. They shall focus on factual, legal or technical errors in the proposed resolution.

Late-submitted comments will ordinarily be rejected. However, in extraordinary circumstances a request for leave to submit comments late may be filed. An accompanying declaration under penalty of perjury shall be submitted setting forth all the reasons for the submission.

Replies to the comments may be submitted five days after the comments are submitted and shall be limited to identifying misrepresentations of law or fact contained in the comments of other parties. Replies shall not exceed five pages in length, and shall be submitted and served in the manner as comments.

Sincerely,

/s/ HAJI JAMEEL
Haji Jameel
Consumer Protection and Safety Division

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

CONSUMER PROTECTION & SAFETY DIVISION
RAIL SAFETY ENGINEERING BRANCH

Resolution SX-49
July 17, 2002

R E S O L U T I O N

RESOLUTION SX-49 ORDER AUTHORIZING DEVIATION FROM GENERAL ORDER NO. 75-C, SECTION 7.8, ALLOWING THE UNION PACIFIC RAILROAD COMPANY TO RETAIN, UNDER CERTAIN CONDITIONS, THE USE OF 20-INCH BACKGROUNDS INSTALLED ON ITS RAILROAD CROSSING WARNING DEVICES CURRENTLY IN OPERATION.

Summary

The Union Pacific Railroad Company (UPRR) requests the California Public Utilities Commission (Commission) to authorize a deviation from General Order No. 75-C (G.O. 75-C), Section 7.8, requiring that backgrounds mounted on railroad crossing warning devices be 20 inches in diameter for 8 3/8-inch (8-inch) roundels and 24 inches in diameter for 12-inch roundels. The deviation would allow UPRR to retain the use of 20-inch in diameter backgrounds on its warning devices currently in operation. This Resolution authorizes UPRR the deviation from G.O. 75-C, Section 7.8, to retain the use of 20-inch backgrounds mounted on some of its railroad crossing warning devices currently in operation. The exemption applies to warning devices located at railroad crossings where the clearance envelop between the warning device and the roadway would have to be modified to accommodate a 24-inch background as specified in the Manual of Uniformed Traffic Control Devices (MUTCD).

Background

Pub. Util. Code § 768 grants the Commission the authority to prescribe the installation, use, maintenance, and operation of appropriate safety or other

devices or appliances, and other protective devices at grade crossings. Pub. Util. Code § 1202 grants the Commission exclusive power to determine and prescribe the manner, terms of installation, operation, maintenance, use and protection of railroad crossings.

Rules governing the protection of crossings at grade of roads, highways and streets with railroads are codified in G.O. 75-C. Section 7.8 of G.O. 75-C states: “*Hoods and backgrounds*: Lamps shall be properly hooded. Hoods and backgrounds shall be black. Backgrounds shall be 20 inches in diameter for 8 3/8-inch roundels and 24 inches in diameter for 12-inch roundels.”

The MUTCD approved by the Federal Highway Administrator establishes the national standards for all traffic control devices installed on any street, highway, or bicycle trail open to the public. The American Railway Engineering and Maintenance of Way Association (AREMA) publishes a Signal Manual of recommended practices for the industry. The bases of these practices are founded on research, testing, and experience by professional engineers.

Discussion

It has been UPRR’s practice to install 12-inch roundels on all its newly installed warning devices. UPRR has also replaced 8-inch roundels with 12-inch roundels on many of its existing warning devices operating throughout California. When converting to the more powerful signals on existing warning devices, UPRR did not increase the size of the backgrounds from 20 inches to 24 inches. The Commission’s rail safety inspectors have taken exception to UPRR’s practice of using 20-inch diameter backgrounds as a means to contrast 12-inch roundels on its automatic warning devices. It is UPRR’s position that the practice of pairing 20-inch backgrounds with 12-inch roundels is justified on existing equipment in operation and that the MUTCD and AREMA Signal Manual indicate that such a practice is acceptable.

To support its opinion, UPRR notes Figure 8D-1 of the MUTCD which illustrates a composite drawing of an active traffic control device. The drawing indicates the option to install either a 20-inch or 24-inch background on a warning device. In addition, Section B.5a of Part 3.2.35 of the AREMA Signal Manual states “ A background having not less than 20-in. diameter shall be provided for the unit.” UPRR believes that the 20-inch minimum background applies to either an 8-inch or 12-inch roundel.

UPRR also notes that MUTCD has established criteria for selecting the size of the roundel that should be mounted on a railroad crossing warning device. Section 4D.15 of the MUTCD directs when an 8-inch or 12-inch roundel should be used. According to Section 4D.15, a 12-inch roundel should be used for approaches where the approach speeds exceed 40 mph, for approaches where a traffic control signal might be unexpected, for approaches without curbs or cutters, and locations where there is a significant percentage of elderly drivers. G.O. 75-C does not prescribe any similar safety guidelines for determining the size of the roundel that should be installed at a railroad crossing.

UPRR also argues that if it were required to provide a 24-inch minimum background for signal assemblies that were installed with a 20-inch background, it is possible that the edge of the larger 24-inch background would extend into the roadway clearance envelope. Such an extension would violate the clearance requirements defined in the MUTCD. The MUTCD requires that the lateral distance be at least 2 feet between the outer edge of the background to the curb, at crossings without curbs, the distance must be at least 6 feet. In order for UPRR to comply with the MUTCD standards, at crossings where the clearance requirement is at issue, warning devices with modified backgrounds would have to be moved to accommodate the clearance requirements. UPRR claims that the expense associated with moving the warning devices, which are embedded in concrete, would be substantial.

The Rail Engineering Safety Branch (RESB) agrees with UPRR that the MUTCD and AREMA Signal Manual appear to indicate that a 20-inch background paired with a 12-inch roundel is acceptable. Figure 8D-1 of the MUTCD, and Part 3.1.35 of the AREMA Signal Manual indicate the option to install either a 20-inch or 24-inch background on a railroad crossing warning device, but the size of the roundel that should be paired with a particular background is not clearly specified.

RESB recognizes that if UPRR were to apply the guidelines in Section 4D-15 of the MUTCD and install 12-inch roundels on its warning devices that have 20-inch backgrounds, UPRR would have to increase the size of the backgrounds to 24 inches in diameter to comply with G.O. 75-C. Similar action would have to be taken on warning devices where 12-inch roundels are now paired with 20-inch backgrounds. In situations where the MUCTD clearance requirements would be at issue, UPRR would have to move each warning device to achieve the proper clearance. Given that a considerable amount of UPRR's warning devices in operation are equipped with 20-inch backgrounds, such an undertaking could

place a substantial burden on UPRR. In situations where the proper clearance exists to accommodate a 24-inch background, UPRR must comply with G.O. 75-C, Section 7.8.

Although Section 7.8 of G.O. 75-C clearly states that backgrounds shall be 20 inches in diameter for 8-inch roundels and 24 inches in diameter for 12-inch roundels, meeting this requirement, in some cases, may not be practical where existing warning devices would be at issue with the MUTCD clearance requirements. In such cases, the 12-inch roundels could be used to enhance the safety of a railroad crossing, but may not be employed because of the requirements defined in Section 7.8 of G.O. 75-C.

RESB is in support of UPRR's request to retain the 20-inch backgrounds on its existing warning devices in operation. If increasing the size of the roundels, from 8 inches to 12 inches will enhance safety at an existing crossing, UPRR should be allowed to retain the size of its backgrounds currently installed without having to perform a major modification at the crossing. This deviation would only apply to warning devices, owned by UPRR, at railroad crossings that would require a major design modification to meet the clearance requirement defined in the MUTCD for warning devices installed with 24-inch backgrounds. In situations where there is proper clearance to accommodate a 24-inch background, UPRR must comply with G.O. 75-C, Section 7.8. Railroad warning devices installed or reinstalled after the effective date of this resolution must adhere to G.O. 75-C, Section 7.8.

Comments on Draft Resolution

The draft resolution of RESB regarding this matter was mailed to the parties in accordance with Pub. Util. Code § 311(g)(1). Comments were filed on _____ and reply comments were filed on _____.

Findings

1. It has been UPRR's practice to install 12-inch roundels on all its newly installed railroad crossing warning devices.
2. UPRR has also replaced 8-inch roundels with 12-inch roundels on many of its warning devices throughout California. When converting to the more powerful signals, UPRR did not increase the size of the backgrounds from 20 inches to 24 inches.

3. The Commission's rail safety inspectors have taken exception to UPRR's practice of using 20-inch diameter backgrounds as a means to contrast 12-inch roundels on its automatic warning devices.
4. It is UPRR's position that the practice of pairing 20-inch backgrounds with 12-inch roundels is justified on existing equipment in operation and that the MUTCD and the AREMA Signal Manual indicate that such a practice is acceptable.
5. The MUTCD establishes criteria for selecting the size of the roundel. G.O. 75-C does not provide any similar guidelines for determining the proper size of the roundel to be used.
6. RESB agrees with UPRR that the MUTCD and AREMA Signal Manual appear to indicate that a 20-inch background paired with a 12-inch roundel is acceptable.
7. The expense for UPRR to modify existing warning devices to accommodate 24-inch backgrounds would be substantial.
8. The RESB staff, of the Consumer Protection and Safety Division, has reviewed UPRR's request and concurs with UPRR in granting a deviation of Section 7.8 of G.O. 75-C.

Therefore, IT IS ORDERED that:

1. The Union Pacific Railroad Company (UPRR) may retain the use of 20-inch backgrounds on its railroad crossing warning devices, currently in operation, at railroad crossings that would require a major design modification to meet the clearance requirement defined in the Manual of Uniform Traffic Control Devices (MUTCD) for warning devices with 24-inch backgrounds.
2. In situations where there is currently the proper clearance as defined in the MUTCD to accommodate a 24-inch background, UPRR must comply with General Order (G.O.) 75-C, Section 7.8.
3. Railroad warning devices installed or reinstalled after the effective date of this Resolution must adhere to G.O. 75-C, Section 7.8.

This Resolution is effective today.

I hereby certify that this Resolution be adopted by the Public Utilities Commission at its regular meeting on _____. The following Commissioners approved it.

WESLEY M. FRANKLIN
Executive Director

CERTIFICATE OF SERVICE

I certify that I have by mail this day served a true copy of the original attached Resolution SX-49 on all parties of record in this proceeding or their attorneys of record.

Dated June 17, 2002, at San Francisco, California.

/s/ VIRGINIA D. LAYA
Virginia D. Laya